APPENDIX 10: PROPOSED GRAZING MANAGEMENT PRACTICES FOR WATER QUALITY IN CALIFORNIA

The Secretary of the Interior directed through regulations issued February 12, 1995 (43 CFR 4180) that each Bureau of Land Management (BLM) State Director develop standards and guidelines for rangeland health. The Fundamentals of Rangeland Health as identified in the regulations includes as one of the conditions that "Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established BLM management objectives such as meeting wildlife needs. The regulations further state that the standards must address water quality and that guidelines must address maintaining, restoring or enhancing water quality to meet management objectives. The identified management practices (commonly known as best management practices (BMPs)) for grazing management in California will serve as refined guidelines for water quality purposes and will supplement and support the standards and guidelines developed for rangelands throughout California.

The following is the identification of the management practices that will serve as the best management practices (BMPs) for the Bureau of Land Management (BLM) to apply to grazing activities in meeting water quality objectives in California. The BMPs for grazing activities will be reflected in a BLM water quality management plan and will be but one element encompassing BMPs for all activities on public lands administered by BLM in California.

BLM Water Quality Management Objectives (to ensure consistency and conformance with the Federal Clean Water Act, Coastal Zone Act Reauthorization, and the Porter-Cologne Water Quality Control Act)

A. BLM shall manage all rangelands under its jurisdiction to conform to, and be consistent with, the following:

   (a) The intent of the Federal Clean Water Act to maintain, protect, and restore the physical, biological, and chemical integrity of the nation's water to the point that they are fishable, swimmable, and drinkable and

   (b) Any and all requirements adopted by the U.S. Environmental Protection Agency, and by the state, regional or tribal authorities pursuant to the Federal Clean Water Act, Coastal Zone Act Reauthorization Amendments, and applicable state laws including:

      1. The Grazing Management Measures identified as guidance for implementing the Coastal Zone Act Reauthorization Amendment.

      2. Resolution no, 95-43 as adopted by the State Water Resources Control Board as recognition and adoption of the California Rangeland Water Quality Management Plan for privately owned rangelands.

B. In the following areas, maintenance, protection and restoration of natural resources, the physical, chemical, and biological integrity of waters, and their beneficial uses shall be a primary management objective for the BLM.

(a) Water bodies that provide or could provide aquatic habitat for Federal threatened or endangered species, Federal Proposed, Category 1 and 2 Federal candidate and other special status species,

(b) Watersheds draining into water bodies that have been listed or are proposed for listing as having threatened or impaired beneficial uses pursuant to the Federal Clean Water Act, and

(c) Riparian and wetland areas that are functioning or could function to protect the integrity and beneficial uses of water.

C. Where the integrity of waters, their beneficial uses, and/or riparian/wetland functions are unimpaired, BLM shall maintain them consistent with existing land use plans and management practices. Where the integrity of waters, their beneficial uses, habitats of special status species, and/or riparian/wetland functions are threatened or are recovering from past impairment, protection thereof shall be of primary management importance for BLM and grazing practices that are known or suspected to contribute to the threat shall be subordinate to achieving recovery or elimination of the threat. Where the integrity of waters, their beneficial uses, habitats of special status species, and /or riparian/wetland function has been or is being impaired, restoration thereof shall be the primary objective for BLM and grazing use shall only be allowed to the degree that there is substantial evidence that it will not contribute to future impairment nor retard recovery.

Management Practices (or Best Management Practices(BMPs))

A. Planning/Process BMPs

1. Develop and adopt appropriate rangeland management systems and/or prescriptions for each allotment. The factors to be considered in developing appropriate rangeland management systems and/or prescriptions shall include, but are not limited to, the following:

(a) The kind and class of livestock to be grazed.

(b) The intensity (stocking level), frequency, season, and duration of grazing;

(c) Pasture rotation and rest;

(d) Distribution of grazing pressure away from water bodies, riparian areas, wetlands and other sensitive areas (e.g. by fencing, herding, placement of feed supplements and alternative watering sites, rotation of concentrated use areas);

(e) Mulch management (residual dry matter (RDM) and/or stubble height) thresholds and/or utilization limits for specific forage species, desirable plants, or types of plant communities;

(f) Location, design, construction, and maintenance of range improvement structures (e.g., watering, holding, and loading facilities, fences, trails, and roads) to avoid or minimize disruption of water body, riparian and wetland functions and discharges of animal wastes and sediment into water bodies;

(g) Land treatments to manage vegetation and/or control invasive or noxious species (e.g., prescribed fire, mechanical methods, seeding, planting, pesticides, biological controls);

(h) Coordination with other land uses and management directives (e.g., recreation, wild horses and burro management, mineral extraction and exploration, forest harvesting) to avoid cumulative watershed effects;

(i) Rangeland monitoring programs to determine implementation and effectiveness of standards, guidelines, and BMPs.

2. Where needed, more restrictive management practices shall be established for; (a) water bodies, (b) riparian areas, and (c) wetland areas. They should also be established in other special situations such as the following:

(a) Grazing at the end of the growing season and/or after fall dormancy;

(b) Presence of critical fisheries and/or special status species;

(c) Unstable stream bank or channel conditions or unhealthy riparian areas (those not fully meeting standards, or those "functioning at risk");

(d) Water bodies that have been listed as having threatened or impaired beneficial uses or provide habitat for threatened or endangered species.

3. To protect annual grassland soils from erosion, specified end-of-season mulch management thresholds shall be developed and adopted.

4. To protect designated ephemeral (annual and perennial) rangeland, reliable estimates of production will be made, and the level of annual growth, RDM, or desirable plant utilization on site at the end of the grazing season shall be specified and adopted.

5. To protect native perennial rangelands, mulch management and plant utilization thresholds specific to the perennial species shall be developed and adopted.

B. Prescriptive BMPs

1. Continuous, season-long livestock grazing shall be allowed only when it has been demonstrated to be consistent with achieving healthy. properly functioning ecosystems and the integrity and beneficial uses of waters.

2. Development of water sources (including springs and seeps) or other projects affecting water and associated resources shall promote and maintain rangeland

health, economic and hydrologic function and processes of watercourses and riparian/wetland ares, and where practicable, year long use by wildlife.

3. Salt blocks, other supplemental feed, and alternate shade and water sources shall be located well away from water bodies and riparian/wetland areas.

4. New livestock management facilities (e.g. (holding corrals for short term use, watering facilities, trails, and roads) shall be located well away from water bodies and riparian/wetland areas and designed to minimize discharges of sediment and animal wastes to water bodies and groundwater.

5. If existing livestock management facilities that are located close to a water body or inside a riparian/wetland area threaten the integrity and beneficial uses of water, the threat shall be eliminated by modification to the design and use of the facility, by eliminating it, or by relocating it as a new facility.

6. Range improvement structures shall be constructed and maintained to function effectively in maintaining, protecting, and/or restoring the integrity and beneficial uses of water.

7. Land treatments to manage vegetation and/or control noxious and invasive plants shall be designed and implemented to avoid or minimize disruption of water body, riparian or wetland functions and/or discharges of sediments, ash, excessive nutrients, or pesticides into water bodies.

8. Livestock trailing, bedding, watering, loading, and other handling efforts, as well as use of roads and other facilities, shall be limited to those areas and times that will not retard or prevent attainment of the integrity and/or beneficial uses of water. Trailing in vernal pools and wetlands shall be avoided whenever possible. In steep terrain, stock trails may be developed to help divert livestock concentrations out of riparian and stream areas. Stream bottoms and banks need to be stabilized at frequently used livestock stream crossing locations and watering access locations to streams.

9. Any new permanent and long-term containment facilities for livestock or wild horses and burros (facilities used for other than temporally holding animals more than a few days) such as corrals, holding pens, feed lots, barns or sheds will adhere to the following guidelines:

   (a) The siting and construction of the facilities should be carefully chosen based on the following guidelines and be located, designed, and constructed under the direction of qualified professionals.

      Facilities should not be located near a stream or water body.

      Facilities should not be located in areas subject to overland surface flow or flooding from upslope areas.

      Facilities should be located on gently sloping to flat land (5% slope or less).

Facilities should not be located in areas which have less than four feet from the soil surface to ground water table at any time of the year or areas having a high leaching potential.

(b) Surface runoff and related discharges from livestock containment facilities should be limited by:

Storing both the facility waste water and the runoff from confined animal facilities that is caused by storms up to and including a 25-year, 24 hour frequency storm. Storage structures should have a compacted clay seal or plastic membrane, be constructed with concrete, or be a storage tank. The stored runoff and accumulated solids from the facility need to be managed through an appropriate waste utilization system.

Surface runoff from these facilities or animal waste stockpile should not be allowed to flow into or near a stream or waterbody.

Stockpiling of animal waste should be thoroughly investigated for the potential to degrade the soil profile and ground water resources. Any runoff or drainage from animal waste stockpiles or the facility area should be routed to the runoff storage system.

Manure storage or animal waste piles should be protected from precipitation and surface runoff.

Anaerobic ponds can be used to reduce odors and solids, improve water quality and generate methane gas.

If the facility is served by vehicle, the site should have loading-unloading areas that are not near streams or water bodies.

(c) Inspections should be conducted regularly. A comprehensive inspection and maintenance program should be developed based upon the specifics of the site, particularly after precipitation of storm events, and repair made as required.

10. Approved livestock parasite control practices will be encouraged that reduce the probability of parasites and pathogens contaminating the water. Any pesticide use for this purpose will be in accordance with pesticide BMPs.

C. BMP Monitoring and Adaptive Management

1. BLM shall ensure that rangeland monitoring is conducted as needed in each allotment based on current accepted practices and techniques to determine utilization of forage resources and trend of rangeland health. Monitoring methodologies will be applicable to local conditions and developed in consultation with permittees/lessees and interested publics.

2. Rangeland monitoring to determine the implementation and effectiveness of the standards, guidelines, and BMPs shall be conducted in all special situations (as identified pursuant to Objective B and BMP A.2). Adaptive management shall be used especially in situations set forth in BMP A.2.

3. Appropriate adjustments (more or less restrictive) shall be made to guidelines, BMPs, and/or their implementation if ; (a) monitoring or verified observation indicates that one or more of the rangeland health standards is not being met or that substantial progress is not being made toward meeting a standard, and (b) if there is evidence that current rangeland management practices or guidelines are causing or contributing to this unsatisfactory condition.